

### **Listing of Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (original): A method of protecting a cell from a toxin comprising:
  - (a) providing an expression cassette comprising a promoter active in said host cell and a gene encoding PON1 under the control of said promoter; and
  - (b) transferring said expression cassette into said cell under conditions permitting expression of PON1.
2. (original): The method of claim 1, wherein PON1 is PON1 type Q.
3. (original): The method of claim 1, wherein PON1 is PON1 type R.
4. (original): The method of claim 1, wherein said cell expresses PON1 type Q.
5. (original): The method of claim 1, wherein said cell expresses PON1 type R.
6. (original): The method of claim 1, wherein said toxin is an organophosphate.
7. (original): The method of claim 6, wherein said organophosphate is an organophosphate pesticide.
8. (original): The method of claim 1, wherein said toxin is a nerve agent.
9. (original): The method of claim 1, wherein said expression cassette further comprises a polyadenylation signal.
10. (original): The method of claim 1, wherein said expression cassette is further comprised within a vector.
11. (original): The method of claim 10, wherein said vector is a viral vector.
12. (original): The method of claim 11, wherein said viral vector is a herpesviral vector, a

retroviral vector, an adenoviral vector, an adeno-associated viral vector, a polyoma viral vector, and a vaccinia viral vector.

13. (original): The method of claim 11, wherein said viral vector is an adenoviral vector.
14. (original): The method of claim 1, wherein said promoter is a constitutive promoter.
15. (original): The method of claim 1, wherein said promoter is an inducible promoter.
16. (original): The method of claim 1, wherein said promoter is a tissue specific promoter.
17. (original): The method of claim 4, wherein said expression cassette increases PON1 type Q expression by about 10-fold.
18. (original): The method of claim 5, wherein said expression cassette increases PON1 type R expression by about 10-fold.
19. (original): The method of claim 1, wherein said cell is a liver cell.
20. (original): The method of claim 1, wherein said cell expresses low levels of PON1 type Q or R as compared to the general population.
21. (original): A method of protecting a subject from a toxin comprising:
  - (a) providing an expression cassette comprising
    - (i) a promoter active in host cells of said subject,
    - (ii) a gene encoding PON1 under the control of said promoter; and
  - (b) administering to said subject said expression cassette under conditions permitting expression of PON1.
22. (original): The method of claim 21, wherein said toxin is an organophosphate.
23. (original): The method of claim 22, wherein said organophosphate is an organophosphate pesticide.

24. (original): The method of claim 21, wherein said toxin is a nerve agent.
25. (original): The method of claim 21, wherein administering comprises intravenously or intraarterially.
26. (original): A method for protecting a subject from chemical warfare agents comprising:
- (a) determining a chemical warfare threat;
  - (b) providing to said subject an expression cassette comprising
    - (i) a promoter active in host cells of said subject,
    - (ii) and a gene encoding PON1 under the control of said promoter,in a form suitable for self administration; and
  - (c) providing to said subject information of said chemical warfare threat and instructions on the self administration of said expression cassette.
27. (original): The method of claim 26, wherein said form suitable for self administration is a pharmaceutical preparation of a virus particle comprising said expression cassette.
28. (original): The method of claim 26, wherein said PON1 is PON1 type Q.
29. (original): A method of protecting a subject from chemical warfare agents comprising administering to said subject an expression cassette comprising:
- (a) a promoter active in cells of said subject; and
  - (b) a gene encoding PON1 under the control of said promoter under conditions permitting expression of PON1.
30. (original): The method of claim 29, wherein said form suitable for self administration is a pharmaceutical preparation of a infectious virus comprising said expression cassette.
31. (original): The method of claim 29, wherein said PON1 is PON1 type Q.

32. (original): A method of treating a subject to protect, correct or retard the progress of a neurodegenerative disease comprising administering to said subject an expression cassette comprising:
- (a) a promoter active in cells of said subject; and
  - (b) a gene encoding PON1 under the control of said promoter under conditions permitting expression of PON1.
33. (original): The method of claim 32, wherein said neurodegenerative disease is Parkinson's Disease or amyotrophic lateral sclerosis.
34. (original): A method of treating or protecting a subject from atherosclerosis comprising administering to said subject an expression cassette comprising:
- (a) a promoter active in cells of said subject; and
  - (b) a gene encoding PON1 under the control of said promoter under conditions permitting expression of PON1.
35. (original): A method of treating or protecting a subject from Gulf War Syndrome comprising administering to said subject an expression cassette comprising:
- (a) a promoter active in cells of said subject; and
  - (b) a gene encoding PON1 under the control of said promoter under conditions permitting expression of PON1.